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10/693,569	10/24/2003	Claudio R. Laraia	ICN001	2156

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EXAMINER	
PAUL, DISLER	
ART UNIT	PAPER NUMBER
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/693,569	LARAIA, CLAUDIO R.	
	Examiner	Art Unit	
	Disler Paul	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-30 is/are rejected.

7)☒ Claim(s) 1,15 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1,15 are objected to because of the following informalities:

   a. In claim 15, the word "off" should be replaced by "of".

   b. In claim 1, the word "couplable" should be replaced by "*couple*"

2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless –

   (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant admitted prior.

Re claim 1, Laraia discloses a car audio amplifier system ("*Fig.1-2*") comprising: a control unit("*fig.1-2/12-the head unit; page 1[004] line 4-5*") including: at least one input connector for receiving at least one respective channel of audio signal from a source("*fig.4/(30,36); page 1[0006] line 9-15*"); at least one control for determining a characteristic of the modifying "*fig.1/(14,22);page 1[004] line 5-7*"); and at least one output connector for outputting the modified audio signal("*fig.4/30;page 1[0005] line 4-7*"); and an amplifier unit physically separate from, and couple to, the control unit("*fig.1-2-physically seperated but couple with cables (18,24,34)*") and including: an input connector for receiving the modified audio signal output

from the control unit ("*fig.5/(32,42);page 1[0007] line 1-2*"),and an output connector for outputting the amplified modified audio signal to a loudspeaker ("*fig.6/20;page 1[0004] line 8-12*").

However, Laraia's prior art did not explicitly disclosed of the circuitry coupled to receive the audio signal from the input connector, for modifying the received audio signal, However, he did disclose of the input connector ("*fig.4/(30,36); page 1[0006] line 9-15*") and signals being modified ("*fig.1/14; page 1[0004] line 5-7*"), therefore it is inherent that there must exist such circuitry coupled to receive the audio signal. Similarly, Laraia's prior art did not explicitly disclosed of the amplification circuitry coupled to the input connector for amplifying the modified audio signal, however, Laraia's prior did disclose of the amplifier's input connector ("*fig.5/(32,42);page 1[0007] line 1-2*") and signals are amplified ("*fig.1/16*"), therefore it is inherent that there must exist such amplification circuitry.

Re claim 2, the car audio amplifier system of claim 1 wherein: the circuitry of the control unit includes a pre-amplifier ("*page 1[0004] line 7*").

Re claim 3, the car audio amplifier system of claim 1 wherein: the input connector of the control unit is further for receiving at least two channels of audio signal from the source("*fig.4/(30,36); page 1[0006] line 9-15*"); the output connector of the control unit is further for outputting at least two channels of modified audio signal("*fig.4/30-input/output connector; page 1[0005] line 4-7*"); and the circuitry of the control unit includes means

for combining two channels of audio signal from the source and providing the combined signal to one channel at the output connector of the control unit("*fig.4/30-signals received at various channel in fig.4/30 all be supplied to connector output (fig.4/38)*").

Re claim 4, The car audio amplifier system of claim 3 wherein: the two channels of audio signal from the source include a Left channel and a Right channel("*page 1[0006] line 8-9;fig.4/(L,R)*"); and the circuitry of the control unit provides a modified Left channel signal to a Front Left channel and a Rear Left channel at the control unit's output Connector ("*fig.4/30;page 1[0005] line 4-7 with the aid of modifier in fig.3/14*"), a modified Right channel signal to a Front Right channel and a Rear Right channel at the control unit's output connector, and a combination of the modified Left channel signal and the modified Right channel signal to one of a Center channel and a Subwoofer channel at the control unit's output connector("*fig.4/30;page 1[0005] line 4-7 with the aid of modifier in fig.3/14*").

Re claim 5, the car audio amplifier system of claim 1 wherein: the amplifier unit includes a plurality of input connectors; and the amplifier circuitry amplifies audio signals provided at a selected one of the plurality of input connectors ("*fig.5/(32,42);page 1[0007] line 1-2*").

Re claim 6, the car audio amplifier system of claim 5 wherein: the amplifier unit includes a first input connector comprising a set of RCA jacks ("page 1[0005] line 6-7"), and a second input connector comprising a DIN connector("*page 1[0006] line 15-17*").

Re claim 7, the car audio amplifier system of claim 1 wherein: all of the controls of the audio amplifier system are located on the control unit ("*fig.1- master control(14) the boos control (22) and station buttons (1-7)*").

Re claim 8, the car audio amplifier system of claim 1 wherein the characteristic comprises gain("*page 1[0009] line 3-6*").

Re claim 9, the car audio amplifier system of claim 1 wherein: the control unit comprises a plurality of controls each for determining a respective one of a plurality of characteristics; and the plurality of characteristics comprises gain and at least one of high pass filter, low pass filter, delay, phase, subsonic filter, subwoofer parametric frequency, and bass boost ("*page 1[0009] line 3-7; page 1[0004] line 15-20*").

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10-21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatent able over Applicant admitted prior at, and further in view of Reynolds et al.("5,444,868").

Re claim 10, the car audio amplifier system of claim 1, However, Laraia fail to disclose the amplifier unit comprises a docking bay adapted for docking the control unit. However, Reynolds et al. disclose a radio system with power amplifier located in the trunk, which includes the amplifier unit, comprises a docking bay adapted for docking the control unit("*fig.1A, fig.2;col.5 line 23-30*") for purpose of forming an integrated radio system. Thus, taking the combined teaching of Prior art of Laramie and Reynolds et al. as a whole, it would have been obvious for one of ordinary skill in the art to modify the prior art of Laraia by incorporating the amplifier unit comprises a docking bay adapted for docking the control unit for purpose of forming an integrated an radio system.

Re claim 11, the car audio amplifier system of claim 10 wherein: the docking bay comprises an input connector adapted to mate with the output connector of the control unit when the control unit is docked ("*fig.2/input connector(28) with control output connector(27)and also see fig.1B-adaptor for (16-control head) and the (14-power amplifier)*").

Re claim 12, an amplifier system for use in a vehicle("*fig.1-2*") comprising, a control unit input connector for receiving the plurality of audio channel signals, a plurality of controls including at least a gain control("*page 1[0009] line 3-6*"),and a control unit output connector for outputting the plurality of modified audio signals("*fig.4/30;page 1[0005] line 4-7*"); and an amplifier unit comprising, an amplifier input connector coupled to the control unit output connector to receive the modified audio signals("*fig.5/(32,42);page 1[0007] line 1-2*"), and speaker terminals coupled

to the amplifier circuitry for outputting the amplified modified audio signals ("*fig.6/20;page 1[0004] line 8-12*").

However, Laraia's prior art did not explicitly disclosed of the circuitry coupled to the input connector, for modifying the received audio signal in response to settings of the controls, However, he did disclose of the input connector ("*fig.4/(30,36); page 1[0006] line 9-15*") and signals being modified ("*fig.1/14; page 1[0004] line 5-7*"), therefore it is inherent that there must exist such circuitry coupled to the input connector. Similarly, Laraia's prior art did not explicitly disclose of the amplification circuitry coupled to the input connector for amplifying the modified audio signal, however, Laraia's prior did disclose of the amplifier's input connector ("*fig.5/(32,42);page 1[0007] line 1-2*") and signals are amplified ("*fig.1/16*"), therefore it is inherent that there must exist such amplification circuitry.

However, Laraia's prior art fail to disclose the head unit being in the passenger compartment, the amplifier system comprising: a control unit adapted to mount in the passenger compartment. However, Reynold et al. disclose a radio system with power amplifier located in the trunk which the head unit being in the passenger compartment, the amplifier system comprising: a control unit adapted to mount in the passenger compartment ("*col.5 line 36-40-control unit may be adapted to an area remote from the power amplifier such as passenger compartment and being remote control option see col.5 line 30-31*") for purpose of providing a remote access to the power amplifier. Thus, taking the combined teaching of Laraia's prior art and Reynold et al. as a whole, it would have been obvious for one of ordinary

skill In the art to modify the Laraia's prior art by incorporating the head unit being in the passenger compartment, the amplifier system comprising: a control unit adapted to mount in the passenger compartment for purpose of providing a remote access to the power amplifier.

Re claim 13, the amplifier system of claim 12 further comprising: a cable coupling the amplifier input connector to the control unit output connector("*fig.2/18; page 1[0005] line 4-7*").

Re claim 14, the amplifier system of claim 13 wherein: the control unit output connector comprises a DIN connector("*fig.4/38*"), However, Laraia's prior art and Reynolds et al. as a whole, did not explicitly disclose of the amplifier input connector comprising a DIN connector, However, he did disclosed of the control unit output connector with Din Connector ("*fig.4/38*") and the control unit input is coupled to the amplifier input connector, thus it is inherent that there must exist such amplifier input Connector in mating the two units. The combined teaching of Laira's prior art and Reynolds et al. as a whole, fail disclose of the cable comprises the specific a DIN umbilical cable. However, Official Notice is taken that the limitation of having a DIN umbilical cable is commonly known, thus it would have been obvious for one of ordinary skill in the at to have such DIN umbilical cable or purpose of coupling the input to the output DIN Connector.

Re claim 15, the amplifier system of claim 12 wherein the plurality of controls comprises all of the amplifier system's gain controls ("*page 1[0009] line 6*").

Re claim 16, the amplifier system of claim 12 wherein the plurality of controls further includes a filter control ("*page 1[0009] line 5-7*").

Re claim 17, the amplifier system of claim 16, However, Laraia's prior art and Reynolds et al. as a whole, fail to disclose the plurality of control comprises a delay control. However, Official Notice is taken that having a delay control in an amplifier is commonly known, therefore it would have been obvious for one of ordinary skill in the art to have plurality of control comprises a delay control for purpose of achieving optimal setting.

Re claim 18, with respect to phase control has been analyzed and rejected with respect to claim 17.

Re claim 19, the amplifier system of claim 18 wherein the plurality of controls further includes a bass boost control("*fig.1/22; page 1[0004] line 13-15*").

Re claim 20, the amplifier system of claim 12 wherein the plurality of controls further includes a master volume control which operates in addition to a gain control of any respective channel("*fig.1-3/14;page 1[0004] line 4-5*").

Re claim 21, the amplifier system of claim 12 wherein the plurality of controls further includes a multi-channel equalizer ("*page 1[0004] line 16-17*").

Re claim 24, the amplifier system of claim 12 wherein: the amplifier unit includes a docking bay into which the control unit can be docked; and means for connecting the control unit output connector to the amplifier input connector("*Reynold,col.5 line 39-35*").

Re claim 25, the amplifier system of claim 12 wherein the plurality of audio channel signals provided by the head unit includes Front Left, Front Right, Center, Rear Left, Rear Right, and Subwoofer audio channel signals ("*fig.4/30; page 1[0006] line 10-12*"), and wherein the plurality of controls comprises: Front gain, Front high pass filter, Center gain, Center high pass filter, Rear gain, Rear high pass filter, Subwoofer gain, Subwoofer low pass filter, Subwoofer phase and Subwoofer bass boost("*page 1[0010] line 3-6; page 1[0004] line 16-20*").

However, Laraia's prior art fail to disclose the center plurality of control comprises a center delay, rear delay ,Subwoofer subsonic filter, subwoofer parametric frequency. However, Official Notice is taken these limitations are commonly known/used in the art, therefore it would have been obvious for one of ordinary skill in the art to have plurality of control comprises a center delay, rear delay ,Subwoofer subsonic filter, subwoofer parametric frequency for purpose of achieving optimal setting.

Re claim 26, in regard to method of adjusting the audio characteristic of the audio system has also been analyzed and rejected with respect to claim 12.

Re claim 27, the method of claim 26 wherein: adjusting the control comprises adjusting a channel gain control("*page 1[0009] line 3-6*").

Re claim 28, the method of claim 27 wherein: adjusting the control further comprises adjusting a channel filter control ("*page 1[0009] line 3-6*").

Re claim 29, the method of claim 28 further comprising: selecting back and forth between audio signals provided by the head unit and audio signals provided by an auxiliary unit("*page 1[0006] line 13-15*"); and adjusting an input level adjustment control on the control unit ("*fig.1/14*"), to substantially equalize an audio volume produced in response to the audio signals provided by the head unit and an audio volume produced in response to the audio signals provided by the auxiliary unit("*fig.1/22-to equalized signals*").

Re claim 30, the method of claim 26 further comprising: removing the control unit from the passenger compartment; and docking the control unit into a docking bay on the external amplifier("*Reynolds, Fig.2*").

5. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior at, and further in view of Reynolds et al.("5,444,868") and further in view of Koulopoulos et al.("5,243,344").

Re claim 22, the amplifier system of claim 12 wherein the control unit further includes: an auxiliary input connector for receiving audio channel signals from an auxiliary unit("*fig.4/36*"); the input connector("*fig.4/(30,36); page 1[0006] line 9-15*") and auxiliary input connector ("*fig.4/36*") However, Laraia's prior art and Reynold et al. as a whole, fail to disclose of the input selector control for selecting whether the circuitry modifies the audio channel signals from the input connector or the audio channel signals from the auxiliary input connector. However, Koulopoulos et al. disclose a digital to analog converter in which there is an input selector control for selecting between two inputs ("*col. 14 line 45-55*") for the purpose of accepting either digital audio data on coaxial cable or digital audio data in optical forms. Thus, taking the modified combined teaching of Laraia's prior art and Reynold et al. and Koulopoulos et al as a whole, it would have been obvious to one of ordinary skill in the art to modify Laraia's prior art and Reynold et al. as a whole, by incorporating the input selector control for selecting between two inputs for the purpose of accepting either digital audio data on coaxial cable or digital audio data in optical forms.

Re claim 23, the amplifier system of claim 22 wherein the control unit further includes: input volume means for compensating for signal level

difference between audio channel signals from the input connector and audio channel signals from the auxiliary input connector("*Fig.1/14;page1[0004] line 5-7*"), whereby when a user switches between the head unit and the auxiliary unit by operating the input selector control, a difference in audio volume from the loudspeakers is controlled ("*user switch as being the input selector in Koulopoulos,"col. 14 line 45-55"*).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-272-2222. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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